

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
29 September 2005 (29.09.2005)

PCT

(10) International Publication Number
WO 2005/091418 A2

(51) International Patent Classification⁷: H01M 8/22, 8/06

(DK). QUAADE, Ulrich [DK/DK]; Gammelmosevej 331, DK-2880 Bagsværd (DK).

(21) International Application Number:

PCT/DK2005/000196

(74) Agent: ZACCO DENMARK A/S; Hans Bekkevolds Allé 7, DK-2900 Hellerup (DK).

(22) International Filing Date: 22 March 2005 (22.03.2005)

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language:

English

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(26) Publication Language:

English

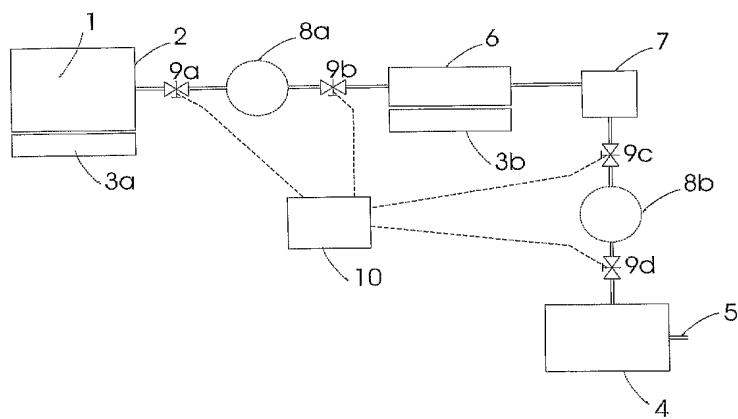
(30) Priority Data:

PA 2004 00469 23 March 2004 (23.03.2004) DK

(71) Applicant (for all designated States except US): AM-MINEX A/S [DK/DK]; Kemitorvet, Bygning 206, DK-2800 Kgs. Lyngby (DK).

[Continued on next page]

(54) Title: USE OF AN AMMONIA STORAGE DEVICE IN PRODUCTION OF ENERGY



WO 2005/091418 A2

(57) Abstract: An electric power generating unit comprising (i) an ammonia storage device in the form of a container comprising an ammonia absorbing and releasing salt of the general formula: $M_a(NH_3)_nX_z$, wherein M is one or more cations selected from alkali metals, alkaline earth metals, and transition metals such as Li, K, Mg, Ca, V, Cr, Mn, Fe, Co, Ni, Cu or Zn, X is one or more anions selected from fluoride, chloride, bromide, iodide, nitrate, thiocyanate, sulphate, molybdate, phosphate, and chlorate ions, a is the number of cations per salt molecule, Z is the number of anions per salt molecule, and n is the coordination number of 2 to 12. (ii) means for heating said container and ammonia absorbing and releasing salt for releasing ammonia gas and (iii) a fuel cell for converting ammonia directly into electric power; or (iiib1) a reactor for dissociating ammonia into hydrogen and nitrogen and (iiib2) a fuel cell for converting hydrogen into electric power is useful for large stationary energy producing facilities, but also for use for is useful for large stationary energy producing facilities, but also for use for small rechargeable and/or replaceable power supply units for micro-fabricated or miniaturized ammonia decomposition reactors for use in mobile units and portable devices may be used for large energy producing facilities, and by use of small rechargeable and/or replaceable ammonia storage decomposition reactors, it is also possible to provide energy for mobile units and portable devices.



Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.